



Research Paper

Structure and conduct of private vegetable market *vis-à-vis* public vegetable market – A study in Kolar district of Karnataka state

■ V. MANJUNATH AND M.R. GIRISH

See end of the paper for authors' affiliations

Correspondence to :

V. MANJUNATH
Department of Agricultural
Marketing, Co-operation
and Business Management,
University of Agricultural
Sciences, BENGALURU
(KARNATAKA) INDIA

Paper History :

Received : 18.04.2016;

Revised : 23.07.2016;

Accepted : 19.08.2016

ABSTRACT : The present study was conducted in Mulbagal taluk of Kolar district of Karnataka state. The study analysed and compared the structure and conduct of private vegetable market [Mahatma Gandhi – 6 Fruits and Vegetables Wholesale Market (India) Private Limited] and public vegetable market (Mulbagal APMC). The primary data was collected from 50 farmer respondents participating in MG-6 market and another 50 farmers participating in Mulbagal APMC market, resulting in a total sample size of 100 farmers. MG-6 market was oligopolistic in nature while Mulbagal APMC market was monopolistic in nature. Infrastructural facilities such as market yard, auction platform, storage / godown, weighing machine, shops, public address system, audio visual aids and electrification were available in both the markets. The method of price determination followed in both MG-6 and APMC markets was open auction method. Tomato was the major vegetable traded in both the markets. The market fee collected in MG-6 market was two per cent while in the case of Mulbagal APMC market; it was only one per cent. In both the markets, the major marketing cost was transportation.

KEY WORDS : Market structure, Market conduct, Private market, Public market, Price

HOW TO CITE THIS PAPER : Manjunath, V. and Girish, M.R. (2016). Structure and conduct of private vegetable market *vis-à-vis* public vegetable market – A study in Kolar district of Karnataka state. *Internat. Res. J. Agric. Eco. & Stat.*, 7 (2) : 191-197, DOI : 10.15740/HAS/IRJAES/7.2/191-197.

INTRODUCTION :

India is basically an agrarian society where sole dependence has been on agriculture since time immemorial. Agricultural sector is of great significance in the socio-economic development of people of India as about 68 per cent of the population lives in rural areas and virtually all of them depend on agriculture for their livelihood. In the olden days, the agricultural produce was fundamentally bartered by nature where farmers exchanged goods for goods and also against services. Gradually, the scenario changed with the changing times

and sale of agricultural produce began with an element of commercial value. Agricultural marketing covers the services involved in moving an agricultural product from the farm to the consumer. India is the second largest producer of vegetables in the World next to China (George and Singh, 2002). With the gradual development of commercialized agriculture; marketing of farm products has assumed greater importance in recent years. In a developing country like India, marketing of vegetable commodities has become important, bigger, complex and more advanced than production, for better performance and diversification of agriculture (Basu, 2002).

Fruits and vegetables produced in India are marketed mostly either through regulated markets (APMCs) or totally unregulated local fruit and vegetable markets. Marketing through these traditional channels is characterized by very little attention to grading, sorting and storage with improper regulation, poor handling during loading, unloading and transport resulting in loss of 30-40 per cent of the total production. Organized marketing of agricultural commodities has been promoted in the country through a network of regulated markets. These regulated markets are established as per the provisions of the Marketing of Agricultural Produce Acts' of State Governments. To cope with the need to handle increasing agricultural production, the number of regulated markets has been increasing in the country. By the end of 1950, there were only 286 regulated markets in the country. This number has increased and as on 31st March 2014, the number stood at 7,114, consisting of 2,483 principal markets and 4,631 sub-market yards.

The private sector is that part of the economy, sometimes referred to as the citizen sector, which is run by private individuals or groups, usually as a means of enterprise for profit and is not controlled by the State. In addition to the efforts of the Government, there also have been some initiatives by the private sector with regard to organized marketing of agricultural commodities. One such initiative has been Delhi-based Premium Farm Fresh Produce Ltd. established in 2009 at Nasik, Maharashtra. In Karnataka, one similar initiative is Mahatma Gandhi-6 (MG-6) Fruits and Vegetables Wholesale Market (India) Private Limited established on 19th July 2013 by Mr. Gangi Reddy and Mr. M. Gopal in Mulbagal taluk of Kolar district. This is the first private fruits and vegetables market established in Karnataka with modern infrastructural facilities for the wholesale marketing of fruits and vegetables.

Market structure and market conduct :

Market structure refers to a set of market characteristics that determine the economic environment in which a firm operates (Thomas and Maurice, 2011). It is characterized on the basis of four industry characteristics, viz., number and size distribution of active buyers and sellers and potential entrants, degree of product differentiation, amount and cost of information about product price and quality and conditions for entry and exit (Hirschey and Pappas, 1993).

Market conduct refers to the patterns of behaviours

that firms follow in adapting or adjusting to the markets in which they sell or buy. The dimensions of conduct include methods employed by firms in determining the price of an output and sales promotion policy, the presence or absence of coercive tactics directed against either established rivals or potential entrants (Bain, 1968).

The present study analysed and compared the structure and conduct of a private vegetable market [Mahatma Gandhi – 6 Fruits and Vegetables Wholesale Market (India) Private Limited] compared to that of a public vegetable market (Mulbagal APMC).

MATERIALS AND METHODS :

The present study was carried out in Mulbagal taluk of Kolar district of Karnataka state in the year 2014-15. Mulbagal taluk was purposively selected for the study due to presence of both private and public vegetable markets in the taluk. Mulbagal APMC market and MG-6 Fruits and Vegetables Wholesale Market (India) Private Limited were selected for the study. For the study, 50 farmer respondents each participating in MG-6 market and Mulbagal APMC market, resulting in a total sample size of 100 farmers were randomly selected. In addition, 10 wholesalers and five commission agents were also selected for the study. Descriptive statistics were used to analyse, summarise and describe the data of the study.

RESULTS AND DATA ANALYSIS :

The results obtained from the present investigation as well as relevant discussion have been summarized under following heads :

Structure and conduct of MG-6 market and Mulbagal APMC market :

Table 1 presents the structure and conduct of MG-6 market and Mulbagal APMC market. MG-6 market was established on 19th July 2013 in Kappalamadugu village, Mulbagal taluk with a market yard area of five acres and 20 guntas. The proprietors of this market are Mr. Gangi Reddy and Mr. M. Gopal. It is located at 6.4 km from Mulbagal and at two km from Vadahalli sub-market yard of Mulbagal APMC. Mulbagal APMC market was established in 1964 in Mulbagal town as per the Karnataka Agricultural Produce Marketing (Regulation) Act 1966, with an area of 23 acres and 29

Table 1: Structure and conduct of MG-6 market and Mulbagal APMC market

Sr. No.	Particulars	MG-6 Wholesale Market (India) Pvt. Ltd.			Mulbagal APMC market		
1.	Date / year of establishment	19 th July 2013			1964		
2.	Location of market	Kappalamadugu village, Mulbagal taluk			Near Ambedkar Nagar, Mulbagal town		
3.	Promoters	Mr. Gangi Reddy and Mr. M. Gopal			State Government		
4.	Size of market yard	5 acres, 20 guntas			23 acres, 29 guntas		
5.	Size of sub-market yard	NA			4 acres, 31 guntas		
6.	Method of price determination	Open auction			Open auction		
	Auction hours	9 am to 12 noon			9 am to 6 pm		
7.	Distance (km) of market from						
	Nearest city - Mulbagal	6.4 km			1 km		
	Other competing market (s)	2 km – Vadahalli			6 km – MG-6		
8.	Coverage of market						
	Radius in km	60 km			30 km		
	No. of villages	90 - 100			100 - 150		
9.	Commodities transacted	All vegetables			All notified commodities		
10.	Major commodities traded	Tomato			Tomato, mango and groundnut		
11.	Minor commodities traded	Carrot			Millets, fruits and forest products		
12.	No. of farmers in market committee	NA			11		
13.	No. of market functionaries operating in the market	15			170		
14.	Terms and conditions of sale	Buyers have to make payment within a couple of days to management			Immediate payment has to be done to the farmers		
		Buyer pays 2 % as service charge to management and 3 % as commission to commission agent			Food grains 1.50 %		
					Fruits and vegetables 1 %		
					Cattle Rs. 5/-		
					Sheep and goat Rs. 1/-		
15.	Volume of transaction per day	Peak season	100 metric tonnes (tomato)		Peak season	130 metric tonnes (tomato)	
						35 metric tonnes (other vegetables)	
		Lean season	72 metric tonnes (tomato)		Lean season	85 metric tonnes (tomato)	
						20 metric tonnes (other vegetables)	
16.	Market fee collected / annum (2013-14)	Rs. 18,64,358/-			Rs.44,83,322/-		
17.	No. of vehicles owned by market	3 vehicles			1 car and 1 tractor		
18.	Infrastructure facilities available	MG-6 market			Mulbagal APMC market		
	Facilities	Yes / No	No. / size / capacity	Functional /Non-functional	Yes / No	No. / size /capacity	Functional / non-functional
	Market yard / sub-yards	Yes	1	Functional	Yes	1	Functional
	Auction platforms	Yes	1	Functional	Yes	3	Functional
	Grading / packing sheds	Yes	2	Non-functional	No		
	Storage / godown	Yes	350 sq. ft.	Functional	Yes	28	Non-functional
	Cold storage / warehouses	Yes	250 MT	Non-functional	No		
	Weighing machine	Yes	4	Functional	Yes	1	Functional
	Shops	Yes	4	Non-functional	Yes	24	Functional
	General notice board	No			Yes	2	Functional
	Notice board for displaying price	No			Yes	1	Functional
	Public address system	Yes	1	Non-functional	Yes	1	Functional
	Audio visual aids	Yes	6	Non-functional	Yes	1	Functional
	Computers	Yes	15	Functional	No		

Table 1: Contd.....

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Office rooms with attached bathroom for traders	Yes	15	Functional	No
Public utilities	Yes			No
Rest house for farmers	Yes	14	Functional	No
Canteen	Yes	1	Non-functional	No
Parking	Yes	47,250 sq.ft.	Functional	No
Electrification	Yes		Functional	Yes

guntas. It has a sub-market yard of area four acres and 31 guntas, located at Vadahalli.

Infrastructural facilities such as market yard, auction platform, storage / godown, weighing machine, shops, public address system, audio visual aids and electrification were available in both the markets while facilities such as input / sundry shops, garbage disposal system, fire extinguishers and sanitary staff were not available in the both markets. The facilities such as general notice board and notice board for price displays were available in Mulbagal APMC market while it was not available in MG-6 market. The facilities such as grading / packing sheds, cold storage / warehouse, computers and office rooms with attached bathroom for traders, public utilities, rest rooms for farmers, canteen and parking were available in MG-6 market while it was not available in Mulbagal APMC market.

In the private market, *i.e.*, MG-6 market, 15 market functionaries were operating while in the case of public market, *i.e.*, Mulbagal APMC market, 170 market functionaries were transacting (Table 1). Hence, MG-6 market was oligopolistic in nature while Mulbagal APMC market was monopolistic in nature.

In both the markets, trading was through open auction and the hours of trading in MG-6 market and Mulbagal APMC market was 9 am to 12 noon and 9 am to 6 pm, respectively. The coverage of MG-6 market is 90-100 villages spread across a radius of 60 km while that of Mulbagal APMC market is 100-150 villages spread across a radius of 30 km. In MG-6 market, all the vegetables were transacted while in the case of Mulbagal APMC market, the notified commodities (113 in number) were traded.

Tomato was the major vegetable transacted in MG-6 market while tomato, mango and groundnut were the major commodities traded in Mulbagal APMC market.

In the case of MG-6 market, the farmer got the payment immediately from the market and the buyer had to make this payment to the market within a couple of days. However, in the case of Mulbagal APMC market,

the buyer had to make the payment immediately to the farmer. The market fee collected in MG-6 market was two per cent while in the case of Mulbagal APMC market; it was only one per cent. Out of this two per cent market fee, one per cent goes to Mulbagal APMC market and the remaining one per cent goes to MG-6 market.

The buyer in MG-6 market pays two per cent as service charge to management and three per cent as commission to commission agent. However, in the case of Mulbagal APMC market, the market fee was one per cent for fruits and vegetables, 1.5 per cent for food grains, rupees five per head in the case of cattle and rupee one per head in the case of sheep and goat. The market fee collected per annum by MG-6 market was Rs. 18,64,358 /- for the year 2013-14 and in the case of Mulbagal APMC market, it was Rs. 44,83,322 /-.

The volume of transaction per day in MG-6 market was about 100 metric tonnes of tomato during peak season and about 60 metric tonnes of tomato during lean season. However, in the case of Mulbagal APMC market, the volume of transaction per day was about 130 metric tonnes of tomato and about 35 metric tonnes of other vegetables during peak season and about 85 metric tonnes of tomato and about 20 metric tonnes of other vegetables during lean season.

In the case of MG-6 market, the commission agent provides an online computerized bill to the farmer which includes name of the farmer, his address, quantity sold, price realized and the name of the buyer. As mentioned earlier, the farmer got the payment immediately from the market and the buyer had to make this payment to the market within a couple of days. This was done to avoid frauds and cheating by the commission agents. The buyers also are provided a copy of the online computerized bill by the commission agent. However, in the case of Mulbagal APMC market, there is no such kind of online computerized billing in place.

The buyers in MG-6 market were mainly wholesalers from Tamil Nadu, Maharashtra, Kerala and Madhya

Pradesh. However, the buyers who transacted in Mulbagal APMC market were mainly local retailers (in relatively smaller quantities), bulk buyers such as hotels, hostels, convention halls, etc. and large wholesalers from Bengaluru, Chennai, Mettupalayam, V. Kota, Kolar.

Marketing channels of vegetables in MG-6 market and Mulbagal APMC market :

Table 2 presents the marketing channels of vegetables in both MG-6 and Mulbagal APMC markets. The following three channels prevailed in the study area.

Channel I: Producer – Commission agent – Retailer – Consumer

Channel II: Producer – Commission agent – Wholesaler – Retailer – Consumer

Channel III: Producer – Wholesaler – Retailer – Consumer

Majority (64 %) of the farmers participating in MG-6 market preferred channel II which accounted for about 59 per cent of the total quantity sold by the farmers. This was due to the fact that farmers realized relatively higher prices (from wholesalers) when compared to others channels. This was followed by channel I (30%) which accounted for 37 per cent of the total quantity sold. This was because channel I was the next best channel in terms of price realization, available to the farmers. The

remaining (6 %) preferred channel III as it was a commission agentless channel.

However, in the case of APMC market, majority (62 %) of the farmers marketed their vegetables through channel I which accounted for about 54 per cent of the total quantity sold by the farmers. This was because majority of the buyers who operated in Mulbagal APMC market were local retailers. This was followed by channel III (30 %) which accounted for 32 per cent of total quantity sold as it was a commission agentless channel. The remaining (8 %) preferred channel II.

Costs incurred in marketing of vegetables in MG-6 market and Mulbagal APMC market :

Table 3 presents the costs incurred in marketing of vegetables in MG-6 and Mulbagal APMC markets. The costs incurred in marketing of vegetables in MG-6 and Mulbagal APMC markets were cleaning, bagging, grading, loading, unloading and transportation. In both the markets, the major marketing cost was transportation (47.06 % and 56.48 %, respectively) followed by unloading (17.95 % and 12.53 %, respectively). This was because in the both the cases, the farmers who were located in the surrounding villages (average distance of 23.49 km) had to incur transportation for moving the produce from their respective villages to the markets.

Table 2 : Marketing channels of vegetables in MG-6 market and Mulbagal APMC market

Sr. No.	Particulars	MG-6 market		Mulbagal APMC market	
		Number of farmers	Quantity sold (qtls)	Number of farmers	Quantity sold (qtls)
1.	Channel I	15 (30.00)	11634 (37.00)	31 (62.00)	11147 (54.26)
2.	Channel II	32 (64.00)	18462 (58.71)	4 (8.00)	2849 (13.87)
3.	Channel III	3 (6.00)	1349 (4.29)	15 (30.00)	6548 (31.87)
	Total	50 (100.00)	31445 (100.00)	50 (100.00)	20554 (100.00)

Note: Figures in parentheses indicate percentages to the column total

Channel II: Producer – Commission agent – Wholesaler – Retailer – Consumer

Channel I: Producer – Commission agent – Retailer – Consumer

Channel III: Producer – Wholesaler – Retailer – Consumer

Table 3: Costs incurred in marketing of vegetables in MG-6 market and Mulbagal APMC market

Sr. No.	Particulars	MG-6 market		Mulbagal APMC market	
		Cost (Rs./qtl)	Percentage	Cost (Rs./qtl)	Percentage
1.	Cleaning	2.50	2.68	2.20	4.82
2.	Bagging	11.85	12.72	6.44	14.09
3.	Grading*	4.40	4.72	2.59	5.67
4.	Loading	13.85	14.87	2.94	6.42
5.	Unloading	16.72	17.95	5.73	12.53
6.	Transportation	43.85	47.06	25.82	56.48
	Total	93.18	100.00	45.71	100.00

Note: * at farm level

Obviously, transportation cost was accompanied by unloading cost as the farmers had to bear it after reaching the market. In the case of MG-6 market, the third major marketing cost was loading (14.87 %), followed by bagging (12.72 %), grading (4.72 %) and cleaning (2.68 %). However, in the case of Mulbagal APMC market, the third major marketing cost was bagging (14.09 %), followed by loading (6.42 %), grading (5.67 %) and cleaning (4.82 %).

Vegetable-wise price realized by farmers in MG-6 market and Mulbagal APMC market :

Table 4 presents the vegetable-wise price realized by farmers in MG-6 and Mulbagal APMC markets. In the case of all vegetables except carrot, farmers realized relatively higher prices in MG-6 market when compared to that in Mulbagal APMC market. This was because the commission charge in MG-6 market was less when compared to that in Mulbagal APMC market. In addition, the quality of the produce sold in MG-6 market was relatively better when compared to that in Mulbagal APMC market.

Conclusion :

MG-6 market was oligopolistic in nature while Mulbagal APMC market was monopolistic in nature. Infrastructural facilities such as market yard, auction platform, storage / godown, weighing machine, shops, public address system, audio visual aids and electrification were available in both the markets while facilities such as input / sundry shops, garbage disposal system, fire extinguishers and sanitary staff were not available in the both markets. In both the markets, trading was through open auction. Tomato was the major vegetable transacted in MG-6 market while tomato, mango and groundnut were the major commodities traded in Mulbagal APMC market. In both the markets, the major marketing cost was transportation followed by unloading. In the case of all vegetables except carrot, farmers realized relatively higher prices in MG-6 market when compared to that in Mulbagal APMC market. This was because the commission charge in MG-6 market was less when compared to that in Mulbagal APMC market. The infrastructural facilities at Mulbagal APMC market may be strengthened and better maintained by the APMC in order to provide better facilities / services to the farming

Table 4: Vegetable-wise price realized by farmers in MG-6 market and Mulbagal APMC market

Sr. No.	Vegetable	MG-6 market	Mulbagal APMC market
		Price* (Rs./qtl)	Price* (Rs./qtl)
1.	Ash gourd	1000.00	800.00
2.	Beans	1200.00	1144.00
3.	Beet root	1000.00	780.00
4.	Bitter gourd	880.00	733.33
5.	Brinjal	722.22	690.00
6.	Cabbage	1010.00	972.73
7.	Capsicum	1183.33	850.00
8.	Carrot	1391.67	2100.00
9.	Cauliflower	1100.00	768.75
10.	Chilli	2680.62	2640.74
11.	Cucumber	416.67	350.00
12.	Knolkhol	1180.00	680.00
13.	Ladies finger	950.00	605.00
14.	Potato	883.33	822.22
15.	Tomato	992.98	904.65

Note: * average monthly price (February 2015)

community as well as market functionaries in order to improve the overall efficiency of the market. Given the present findings of the study, the Government may encourage private investment in the marketing of fruits and vegetables.

Authors' affiliations:

M.R. GIRISH, Department of Agricultural Marketing, Co-operation and Business Management, University of Agricultural Sciences, BENGALURU (KARNATAKA) INDIA

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